

ABSTRACT

The present invention provides for a method of using heat shock proteins (HSPs) to amplify the immune response initiated by a vaccine. HSPs can be introduced into a subject before, concurrently, or after the administration of a vaccine. The HSPs can also be used to activate antigen presenting cells which are then introduced into a subject in conjunction with a vaccine. The HSPs used in the methods of the invention can be unbound or can be covalently or noncovalently bound to a peptide that is unrelated to the vaccine. The subject is preferably mammalian, and most preferably human. It is shown by way of example herein that HSPs induces secretion of cytokines and surface expression of antigen-presenting and co-stimulatory molecules. The invention also encompasses methods of treatment and prevention of cancer and infectious diseases in a subject.